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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,996	01/28/2002	Toshinori Ono	29284/556	3323

23838 7590 05/27/2005

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NEW YORK, NY 10004

EXAMINER

RESAN, STEVAN A

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 05/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/055,996

Applicant(s)

ONO ET AL.

Examiner

Stevan A. Resan

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2,3,5,11-13,15 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,5,11-13,15 and 21-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 29 March 2005 has been entered.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 3,5,13,15 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an amorphous carbon layer having a hardness of less than 19 GPa and not less than 15 GPa, does not reasonably provide enablement for an amorphous carbon layer having a hardness of 15-19 GPa. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims.

The specification does not provide support for the range 15-19 Gpa.

Also See Claim 13 last line has a range of 15-1 GPa

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3,13,22 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 22 and 23 claim an amorphous carbon layer present uppermost on the protective film layer in the CSS area while they depend from claims that require a diamond-like (DLC) layer present as the uppermost layer on the protective layer in the CSS area (Claim 2) or ramp load area (claim 11).

Thus, claim 23 has no antecedent basis for a CSS area in claim 11 and even if claim 23 recited, "ramp load area" instead of CSS area it would (as the case with claim 22) be contrary to the limitations of the claims upon which they depend.

There is no antecedent basis for a diamond like layer or an amorphous layer in claims 3 and 13.

7. Claims 2,3,5,11-13,15,21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang et al US 6,086,949 for the reasons of record.

8. Applicant's arguments filed 29 March 2005 have been fully considered but they are not persuasive.

Applicants argue that present claims 2 and 11 are not merely directed to optimizing the properties of the lower and upper layers but directed to optimizing the properties of the protective layer in the CSS/ramp load area and data area by determining the (optimum) composition in each area. Applicants believe this is proved by the comparison studies between Embodiment 6 and Comparative Example 10 in the specification.

However Embodiment 6 is not presently claimed since claims 2 and 11 claim the DLC carbon layer as the uppermost layer while Embodiment 6 (as clearly depicted in Fig 8B) has the amorphous layer as the uppermost layer in the CSS zone.

Applicants argue that Claims 3 and 13 are directed to optimizing the properties of the protective layer in the CSS/ramp load area and data area by specifying the hardness in each area.

However neither claim 3 nor 13 specifies which film (DLC or amorphous) is protecting which area.

The examiner notes that applicants appear to be trying to claim either film (DLC or amorphous) as the uppermost film of the CSS/ramp load zone in which case arguments as to optimization are moot.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stevan A. Resan whose telephone number is 571-272-1513. The examiner can normally be reached on Tues-Thurs from 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Stevan A. Resan', with a stylized flourish at the end.

**STEVAN A. RESAN**  
**PRIMARY EXAMINER**